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EDELL, SHAPIRO & FINNAN, LLC			EXAMINER	
1901 RESEARCH BOULEVARD			SAM, PHIRIN	
SUITE 400			ART UNIT	PAPER NUMBER
ROCKVILLE, MD 20850			2419	
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		03/18/2009	ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

[cpatent@usiplaw.com](mailto:cpatent@usiplaw.com)

<b>Office Action Summary</b>	<b>Application No.</b> 10/028,069	<b>Applicant(s)</b> THIPPESWAMY ET AL.
	<b>Examiner</b> PHIRIN SAM	<b>Art Unit</b> 2419

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 05 February 2009.  
 2a) This action is FINAL.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,3-11,13-17,19-22 and 24-36 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) 1,3-11,13-17,19-22 and 24-31 is/are allowed.  
 6) Claim(s) 32,33,35 and 36 is/are rejected.  
 7) Claim(s) 34 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 02 November 2006 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)  
 2) Notice of Draftperson's Patent Drawing Review (PTO-548)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 32, 33, 35, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2002/0105965 of Dravida et al. (hereinafter "Dravida") in view of US Patent 7,242,694 to Beser (hereinafter "Beser").

**Regarding claim 32**, Dravida discloses a device for forwarding packets to a central access point (see Fig. 3, paragraph [0088]), the device comprising:

(a) a receiving component, the receiving component being arranged to receive a plurality of packets that are to be forwarded to a central access point by a DOCSIS protocol (see Figs. 28, 30, and 34, paragraphs [0237], [0395], and [0398]);

(b) a routing component, the routing component being arranged to receive the plurality of packets from the receiving component (see Figs. 28, 30, and 34, paragraph [0237]); the routing component further being arranged to provide a plurality of packets on a substantially round-robin basis (see Figs. 28, 30, and 34, paragraphs [0237], [0285], [0287], [0288], and [0395]);

Dravida does not explicitly disclose a plurality of service flow identifiers which are associated with a plurality of service flows of said DOCSIS protocol. However, Beser discloses a plurality of service flow identifiers which are associated with a plurality of service flows of said DOCSIS protocol (see Fig. 1, col. 2, lines 6-30). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine a plurality of service flow identifiers which are associated with a plurality of service flows of said DOCSIS protocol teaching by Beser with Dravida. The motivation for doing so would have been to provide to manage the quality of services for each modem read on column 2, lines 13-16. Therefore, it would have been obvious to combine Beser and Dravida to obtain the invention as specified in the claim 32.

**Regarding claim 33,** Dravida discloses the routing component is further arranged to provide a first packet of the plurality of packets to a first service flow identifier of the plurality of service flow identifiers and to provide an Nth packet of the plurality of packets to an Nth service flow identifier of the plurality of service flow identifiers (see Figs. 3, 28, 30, and 34, paragraphs [0237], [0239], [0241], [0271], [0291], and [0340]).

**Regarding claim 35,** Dravida discloses the plurality of packets includes an (N+l)th packet and an (N+N)th packet, wherein the routing component is further arranged to provide the (N+ 1)th packet to the first service flow identifier and the (N+N)th packet to the Nth service flow

identifier (see Figs. 3, 28, 30, and 34, paragraphs [0237], [0239], [0241], [0271], [0291], and [0340]).

**Regarding claim 36,** Dravida discloses the device is one of a subscriber unit and a cable modem (see Fig. 3).

***Allowable Subject Matter***

4. Claim 34 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter:

**Regarding amended claims 1, 3, and claims 4-10,** the prior arts do not disclose determining a first value associated with the packet, the first value being one of a predetermined set of limited values, wherein the first value is determined using the destination information and the source information including applying a hash function to the destination information and the source information and generating the first value using the hash function, wherein the first value is a hash value; and identifying a first service flow that is suitable for use to forward the packet, the first service flow being one of a set of service flows between the source and the destination, wherein the first service flow is identified using the first value associated with the packet.

**Regarding claims 11 and 13-16,** the prior arts do not disclose identifying a number (N) of available service flows between the subscriber unit and the central access point; sending an (N-1)th packet of the session from the subscriber unit to the central access point on an (N-1)th service flow included in the N available service flows; sending an Nth packet of the session from

the subscriber unit to the central access point on an Nth service flow included in the N available service flows; and sending a second packet of the session from the subscriber unit to the central access point on a second service flow included in the N available service flows, wherein the second packet is substantially in sequence behind the first packet and before the (N-1)th packet and Nth packet.

**Regarding amended claims 17, 19, and claims 20, 21,** the prior arts do not disclose means for causing a first value associated with the packet to be determined, the first value being one of a predetermined set of limited values, wherein the means for causing the first value to be determined include means for causing the destination information and the source information to be used, means for causing a hash function to be applied to the destination information and the source information; and means for causing the first value to be generated using the hash function, wherein the first value is a hash value; and means for causing a first service flow that is suitable for use to forward the packet to be identified, the first service flow being one of a set of service flows between the source and the central access point, wherein the means for causing the first service flow to be identified include means for causing first service flow to be identified using the first value associated with the packet.

**Regarding claims 22 and 24-26,** the prior arts do not disclose means for causing a number (N) of available service flows to the central access point to be identified; means for causing an (N-1)th packet of the session to be sent to the central access point on an (N-1)th service flow; means for causing an Nth packet of the session to be sent to the central access point on an Nth service flow included in the N available service flows; and means for causing a second packet of the session to be sent to the central access point on a second service flow, wherein the

second packet is substantially in sequence behind the first packet and before the (N-1)th packet and Nth packet.

**Regarding claims 27-31,** the prior arts do not disclose a hashing component, the hashing component being arranged to apply a hash function to information associated with a first packet to determine a value, wherein the routing component is arranged to provide the information associated with the first packet to the hashing component and the potential number of determined values at least equal to the number of available service flows; and a first service flow identifier, the first service flow identifier being associated with the value, wherein the hashing component associates the first packet with the first service flow identifier.

*Response to Arguments*

6. Applicant's arguments with respect to claims above have been considered but are moot in view of the new ground(s) of rejection.

*Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- (1) US Patent 7,349,430 (Chapman) discloses addressing scheme implemented in access networks.
- (2) US Patent 7,177,324 (Choudhury et al) discloses network having bandwidth sharing.
- (3) US 2003/0058889 (Lansing et al) discloses hardware payload header suppression, expansion, and verification in a DOCSIS network.
- (4) US 2002/0196737 (Bullard) discloses capture and use of service identifiers and service labels in flow activity to determine provisioned service for datagrams in the captured flow activity.

Art Unit: 2419

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHIRIN SAM whose telephone number is (571)272-3082. The examiner can normally be reached on Increased Flexitime Policy (IFP) Program.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272 - 2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Respectfully submitted,

Date: March 10, 2009

By: /Phirin Sam/  
Phirin Sam  
Primary Examiner  
Art Unit 2419